

REMARKS

In the Office Action mailed November 19, 2007 from the United States Patent and Trademark Office, claims 1-5, 7-10, 12, 13 and 15-19 were rejected due to informalities; claims 1-5, 7, 8, 13, 15, 16, 18 and 19 are rejected under 35 U.S.C. § 103 (a) as being unpatentable over Wells et al (5,505,409) in view of Falco et al. (5,133,519), and in further view of Fronek et al. (5,848,769); and claims 9, 10, 12 and 17 are rejected under 35 U.S.C. § 103 (a) as being unpatentable over Wells et al. (5,505,409), and Falco et al. (5,133,519), and Fronek et al. (5,848,769), and in further view of Smith et al. (4,890,803)

Rejections Under 35 U.S.C. § 103(a)

Applicant respectfully submits that the claim set as provided herein is not made obvious by the cited references. The standard for a Section 103 rejection is set forth in M.P.E.P 706.02(j), which provides:

To establish a *prima facie* case of obviousness, three basic criteria must be met. First there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the references or combine reference teachings. Second, there must be a reasonable expectation of success. Finally, **the prior art reference (or references when combined) must teach or suggest all the claim limitations.** The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). (Emphasis added).

Applicant respectfully submits that the references cited by the Examiner, either alone or in combination, do not teach or suggest all the limitations claimed in the claim set provided herein. In particular amended claim one is drawn to a fuselage comprising: a frontal fuselage portion that leads through a fluid; an outer fuselage surface relating with said frontal fuselage portion that receives fluid flow thereon; at least one fluid flow regulator featured and operable with said outer fuselage surface and extending at least a partial distance around said fuselage, said fluid flow regulator comprising: a leading surface; a trailing surface; an orthoganol pressure recovery drop extending a pre-determined distance between said leading and trailing edges to form a down step, said pressure recovery drop comprising at least one drop face of a calculated distance, said fluid flow regulator functioning to regulate existing pressure gradients along said

fuselage to optimize and equalize said fluid flow and to reduce the separation potential of said fluid, wherein the height of a drop face varies along the length of a given drop face, and wherein the drop face further comprises a length of a blended segment which transitions between the variable heights along the length of a given drop face; a sub-atmospheric barrier generated at the base of said drop face as said fluid encounters and flows over said pressure recovery drop, said sub-atmospheric barrier comprising a low pressure area of fluid molecules having decreased kinetic energy that serve as a cushion between said higher kinetic energy fluid molecules in said fluid and the molecules at said outer fuselage surface to facilitate laminar flow and assist in the reduction of the separation potential of said fluid; and a trailing edge that defines and extends from the base of said pressure recovery drop that provides a trailing flow boundary for said fluid.

Independent claim 18 is drawn to a moving body comprising: at least one surface subject to external flow of fluid; at least one fluid flow regulator featured and operable with said surface, said fluid flow regulator comprising: a leading surface; a trailing surface; an orthogonal pressure recovery drop extending a pre-determined distance between said leading and trailing surfaces to form a down step, said pressure recovery drop comprising at least one drop face of a calculated height, said fluid flow regulator functioning to regulate existing pressure gradients along said surface subject to external flow of fluid to optimize and equalize said fluid flow and to reduce the separation potential of said fluid, wherein the height of a drop face varies along the length of a given drop face, and wherein the drop face further comprises a length of a blended segment which transitions between the variable heights along the length of a given drop face, wherein said regulation of said pressure gradients positively influences the flow properties and behavior of said fluid across said surface, and the performance of said moving body; a sub-atmospheric barrier that is generated as said fluid encounters and flows over said pressure recovery drop, said sub-atmospheric barrier comprising a low pressure area of fluid molecules having decreased kinetic energy that serve as a cushion between said higher kinetic energy fluid molecules in said fluid and the molecules at said surface to facilitate laminar flow and assist in the reduction of the separation potential of said fluid; and a trailing edge that defines and extends from the base of said pressure recovery drop that provides a trailing flow boundary for said fluid.

Both independent claims 1 and 18 therefore require that the height of a drop face varies along the length of a given drop face and wherein the drop face comprises length of a blended segment which transitions between variable height drop faces along the length of a given drop

face. These limitations are supported by the disclosure as originally filed. And, none of the references cited by the Examiner, alone or in combination, teaches or suggests such limitations.

Accordingly, Applicant respectfully submits that for at least the reasons provided herein, the references cited by the Examiner, alone or in combination, do not teach or suggest all the limitations of independent claims 1 or 18. And, because the references cited by the Examiner do not teach or suggest each and every limitation of independent claims 1 or 18, Applicant respectfully submits that the prior art references do not make obvious independent claims 1 or 18, as provided herein.

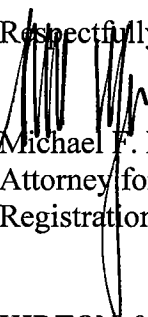
And because the prior art references do not make obvious independent claims 1 or 18, Applicant respectfully submits that the prior art references cited by the Examiner do not make obvious the corresponding dependent claims, which depend from independent claims 1 or 18.

CONCLUSION

Applicant(s) submits that the amendments made herein do not add new matter and that the claims are now in condition for allowance. Accordingly, Applicant(s) requests favorable reconsideration. If the Examiner has any questions or concerns regarding this communication, the Examiner is invited to call the undersigned.

DATED this 19 day of March, 2008.

Respectfully submitted,


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